LEADING

Mid-Cap Research

July 11, 2011

Woojin Inc. (105840 KS)

Strong growth momentum ahead

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82-2-2009-7328

Leading Traffic Light: Green

Woojin Inc. is…

- ✓ A producer of measuring equipments for nuclear power plants (NPPs) and steel production facilities
- ✓ An exclusive domestic supplier of measuring equipments to Korea Hydraulic & Nuclear Power Co. (KHNP) and major steel mills

Green light because:

- ✓ Strong revenue and earnings growth momentum ahead in line with NPP equipment replacement demand and steel capacity expansion
- ✓ Excellent value creation with product mix change to highly profitable NPP equipments

Growth potential:

- ➢ NPP measuring equipment replacement demand and steel capacity expansion to provide strong revenue growth momentum
- ➢ Earnings growth will be in line with top line growth and product mix change

Management & shareholder concern:

- ➢ Strengthened competitiveness through technical alliances with global leading equipment producers
- ➢ Management increased dividends after the IPO in 2010 and plans to maintain payout ratio at 30-40%, which translate into dividend yields of 3-5%

Excellent value creator:

- ➢ Product mix change completely changed value creating structure with ROIC consistently exceeding WACC by 17-20%
- ➢ ROE to remain high at 16%

Valuation:

- ➢ Concerns over the Fukushima nuclear disaster and disappointing 1Q11 results have overplayed
- ➢ The current share price barely reflects the company's monopolistic position in the industry and strong growth story
- ➢ Target price of W20,900 – a 26% upside

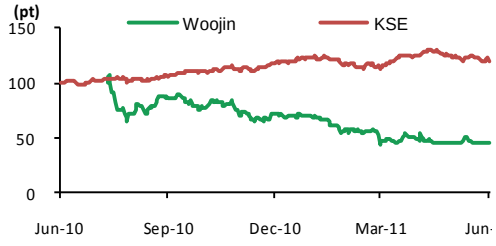
BUY

Target Price (KRW)	**20,900**
Current Price (KRW)	**16,650**
Upside Potential (%)	**25.5**

	July 8, 2011
Sector	Machinery
KOSPI	2,180.35
Market Cap. (Wmn)	144.5
Shares Outstanding	8.68m
Foreign Ownership	2.3%
52 Week High (W)	36,900
Low (W)	15,350
60-d avg. turnover (Wbn)	486
Major Shareholders	**(%)**
Lee, Sung Bum	42.0
Related parties	13.8
Treasury	4.3

Performance (%)	**1M**	**6M**	**12M**
Absolute	6.1	(32.0)	N/A
Relative	4.5	(36.6)	N/A

Relative Performance



CAVEAT EMPTOR!!! – Watch out for…

- ➢ Given that NPP construction and steel capacity expansion projects are essential for the company's long term growth, prolonged delay in those projects will be negative

Valuation Forecast

FY	Sales (Wbn)	% chg yoy	OP (Wbn)	OPM (%)	NP (Wbn)	EPS (W)	EPS Growth (%)	P/E (x)	EV/EBITDA (x)	ROE (%)	P/B (x)
2008	36.5	45.5	7.2	19.6	2.6	497	(32.3)	N/A	N/A	10.0	N/A
2009	50.3	37.7	8.5	16.9	10.6	1,841	270.5	N/A	N/A	30.1	N/A
2010	52.4	4.2	9.0	17.2	11.0	1,479	(19.7)	11.3	9.8	16.5	1.4
2011F	62.5	19.4	10.3	16.4	12.8	1,469	(0.7)	11.3	9.0	14.4	1.6
2012F	74.1	18.6	12.7	17.2	15.5	1,781	21.2	9.4	6.8	16.2	1.4
2013F	86.5	16.7	15.5	17.9	17.8	2,048	15.0	8.1	5.3	16.5	1.3

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Key check points for Woojin Inc.

✓ Strong revenue and earnings growth momentum ahead

We expect a strong revenue growth of 19% yoy in 2011, compared to a relatively low 4% yoy growth in 2010, followed by per annum growth of 17% yoy during 2012 and 2013. Revenue growth will mostly come from nuclear power plant (NPP) measuring equipment sales. Earnings growth will be in line with top line growth and product mix change towards NPP measuring equipments.

✓ Product mix change towards highly profitable NPP measuring equipments

The company became an exclusive supplier of replacement core NPP measuring equipments to Korea Hydraulic & Nuclear Power Co. (KHNP) in 2008 and revenues more than doubled during the 2007-2010 time span. Revenue growth slowed down in 2010, but will resume strong momentum beginning in 2011 benefiting from NPP equipment replacement demand increase. In addition, KHNP will not have to purchase core measuring equipments from Westinghouse Electric Company, LLC any more for new NPPs to be completed in 2016 and thereafter (Page 13). As an exclusive domestic supplier of core NPP measuring equipments to KHNP, Woojin will supply core equipments for new NPPs replacing Westinghouse as early as late 2013.

✓ Steel equipment sales to pick up in line with ongoing steel capacity expansions

While steel production measuring equipments are another major revenue source for the company, growth momentum in total revenues slowed down in 2010 due to the completion of major capacity expansions by steel mills, especially Hyundai Steel (004020 KS). However, another round of steel capacity expansions is underway and steel equipment sales will recover more than 20% yoy in 2012. Woojin virtually monopolizes the domestic steel measuring equipment market.

✓ Huge order of flow meters from Oval Corp. of Japan

The company received a huge order of flow meters (to be installed at oil refinery facilities in Kuwait by the end of 2011) from its joint venture partner, Oval Corp. of Japan, in January this year. This Oval order alone amounts to W13.5bn, compared to total flow meter revenues of W6.1bn in 2010, and will more than offset the decline in steel measuring equipment sales in 2011.

✓ Excellent ROIC and financial stability

The company's value structure was completely changed in 2008 with product mix change towards core NPP equipments, with ROIC jumping to over 26% from 9% in the previous year. We believe the management deserves praise as Heraeus Electro-Nite opposed the expansion into the NPP equipment production (Page 9). ROE will be maintained at around 16% despite the IPO in 2010.

While revenues will rapidly increase in the coming years, working capital management will be no concern for the company as its receivables are settled within a month after delivery at the latest. Also, its major customers are KHNP and POSCO (005490 KS) who have virtually no default risk. In addition, the company has no debt to repay with cash holdings equivalent to almost 90% of its total revenues.

✓ Target price of W20,900 – a 26% upside

The shares are trading in line with the market after falling 55% from the 2010 high of W36,900. Slow earnings growth in 2010, the Fukushima nuclear disaster and disappointing 1Q11 results have dampened investment sentiment. However, the 1Q11 results are simply attributable to the timing of revenue recognition and the Fukushima nuclear disaster is likely to accelerate measuring equipment replacement demand (Page 14). We believe the current share price does not reflect the company's monopolistic position in the measuring equipment market and strong growth potential. Applying a P/E of 14.2X, a 30% premium over the 2011F market P/E to our 2011 EPS estimate of W1,469, we derived our target price of W20,900.

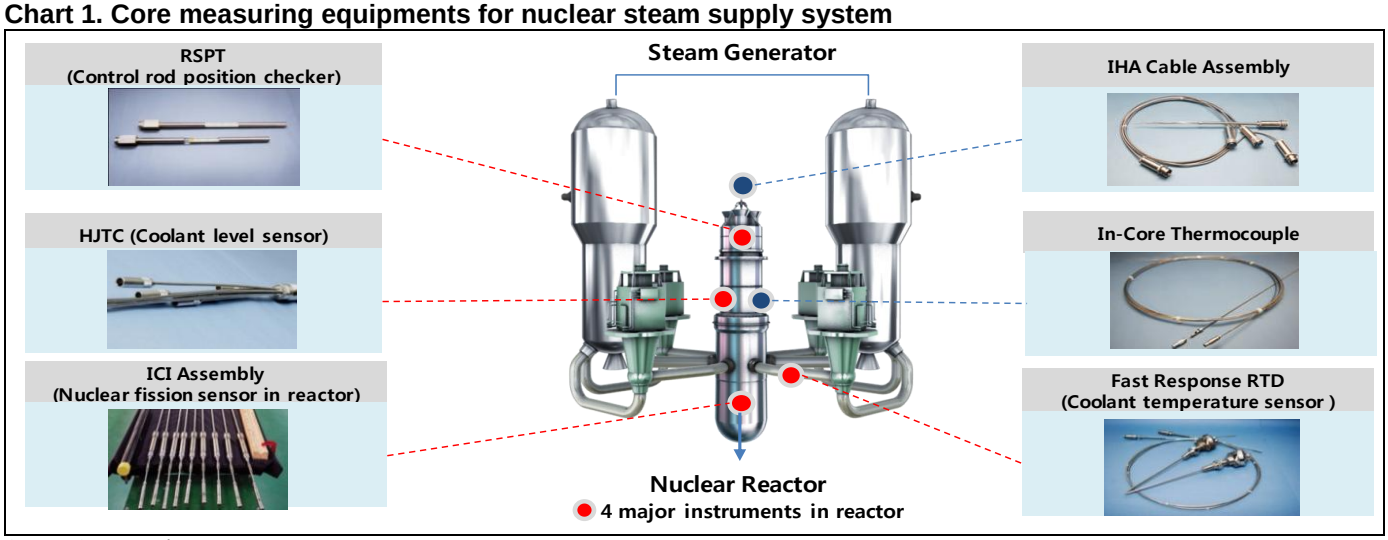
Section 1: The company at a glance

Producer of measuring equipments for nuclear power plants and steel mills

Measuring equipments for NPPs and steel mills are main revenue sources

Measuring equipments for NPPs and steel mills have been the two main revenue sources for Woojin, contributing around 70% of total revenues in 2010. The company is the only Q level producer of measuring equipments for nuclear steam supply system (NSSS) in Korea. The Q level is the highest security level required for core measuring equipments to be used in NSSS, such as in-core instrument (ICI), heated junction thermocouple (HJTC), read switch position transmitter (RSPT) and fast response resistance temperature detector (RTD). Steel production equipments include condition monitoring system (CMS), automatic temperature measurement systems (ATMS), main/sub lances, bottom bubbling and tundish flux feeder. It also produces flow meters for the use in the hydraulic, gas and petrochemical industries.

Chart 1. Core measuring equipments for nuclear steam supply system

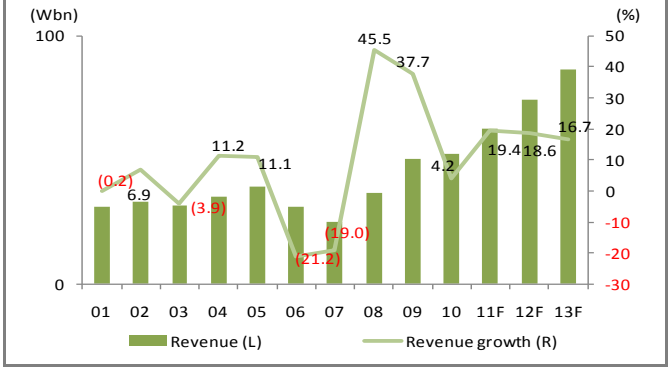


Source: Company data

NPP equipments are the most profitable

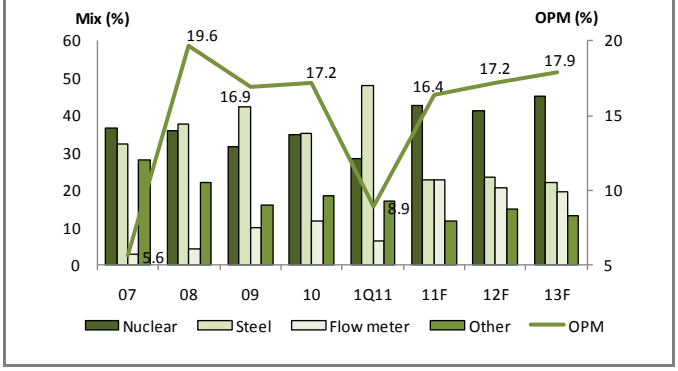
Product mix is the single most important factor for the company's profitability. According to the company, NPP equipments are the most profitable with an average operating margin of around 25%, followed by steel equipments' 17% and flow meters' 7%. As such, increasing supply of core equipments to KHNP dramatically changed the company's profit structure with an overall operating margin jumping to almost 20% in 2008 from a meager 5% in 2007. In 2007, although the NPP equipment portion in total revenues was similar to 2008 level, operating margin was low because steel equipment pricing was exceptionally low and the company still relied a significant portion of NPP equipment sales on non-core equipments.

Chart 2. Revenue and growth trend



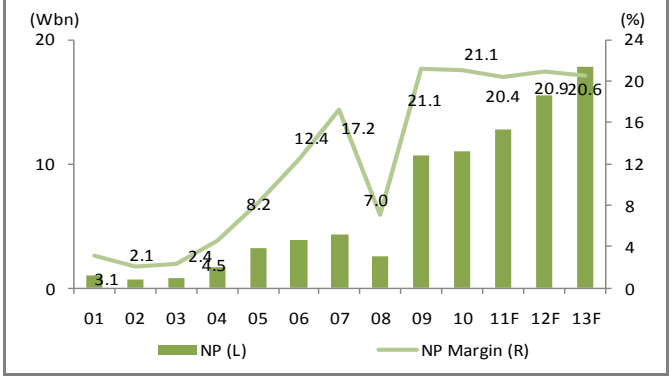
Source: Company data and Leading Research Center

Chart 3. Product mix and OPM trend



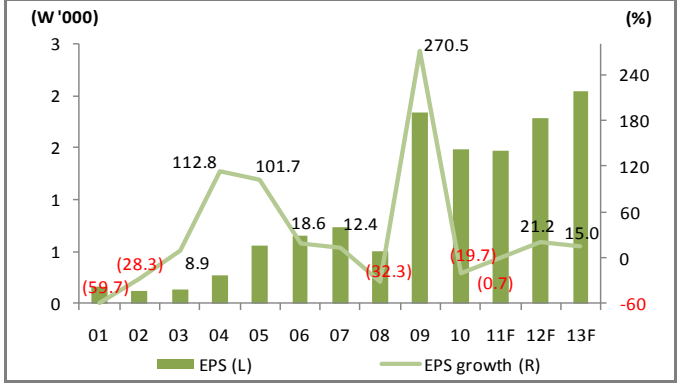
Source: Company data and Leading Research Center

Chart 4. Net profit and NP margin trend



Source: Company data and Leading Research Center

Chart 5. EPS and EPS growth



Source: Company data and Leading Research Center

Reputation in steel measuring equipments enabled the company to enter the NPP equipment market

Woojin was established in 1980 as a joint venture with Osaka Oxygen Ind., a Japanese steel production temperature sensor manufacturer. It initially built its reputation as a leading measuring equipment producer by supplying to POSCO. Its 30 year long business relationship with POSCO was a good reference to Hyundai Steel which purchased measuring equipments from Woojin for its new blast furnace mills. Its technical expertise and track record of quality equipments supply to POSCO also enabled the company to expand into the NPP equipment market.

Entry barrier to the NPP measuring equipment market is quite high

In mid 1990s, KHNP, discontented with its weak bargaining power over Westinghouse. It contacted Woojin for localization of NPP measuring equipments. After several years of development, Woojin was able to supply its first ICI to KHNP in 2002 and begin an exclusive supply of the four main measuring equipments for nuclear reactors (for replacement use) in 2008. The company supplies the same quality NPP equipments as foreign products to KHNP at around 30% lower prices. Given that Woojin became an exclusive domestic supplier of NPP core measuring equipments under technical collaboration with KHNP itself, the entry barrier is quite high.

Technical alliances with global leading producers of measuring equipments

The company has five unlisted affiliates through joint ventures with leading global measuring equipment producers. Heraeus Electro-Nite is the global No. one supplier of steel production sensors with a global market share of around 70% and Woojin Electro-Nite virtually monopolizes the same market in Korea. Other Japanese business partners are also among the top five companies in their respective markets globally or locally.

Benefits from foreign partnerships

The five affiliates have been quite profitable generating equity method gains for Woojin, W3.0bn in 2010, W2.5bn in 2009 and W1.2bn in 2008, which represent 19-23% of Woojin's pretax profits. Besides technical alliances, Woojin also has benefited from these partnerships as it received flow meter orders worth W13.5bn from Oval Corp.

Table 1. Affiliated companies

	Woojin Electro-Nite	Korea Chino	Korea Nagano	Oval Engineering	TOW
Product	Expendible sensors for steel mills	Recorder, Pyrometer Thyristor, Fuel cell	Pressure gauge Temporature gause	Flow meter	Controller Indicator
Shareholder	Woojin 34% Heraeus Electro-Nite 66%	Woojin 50% Chino 50%	Woojin 51% Nagano Marufuji 49%	Woojin 49% Oval 60%	Woojin 50% Toho 50%
Book value	W5.5bn	W3.5bn	W2.1bn	W0.4bn	W0.5bn
2010 Sales	W44.9bn	W13.8bn	W9.8bn	W8.5bn	W3.2bn
Net income	W5.0bn	W0.9bn	W0.8bn	W0.8bn	W0.3bn
Transactions (2010)					
Purchase	W3.9bn	W1.0bn	W0.5bn	W0.5bn	W2.1bn
Sales	W1.3bn		W0.3bn	W0.3bn	

Source: Company data

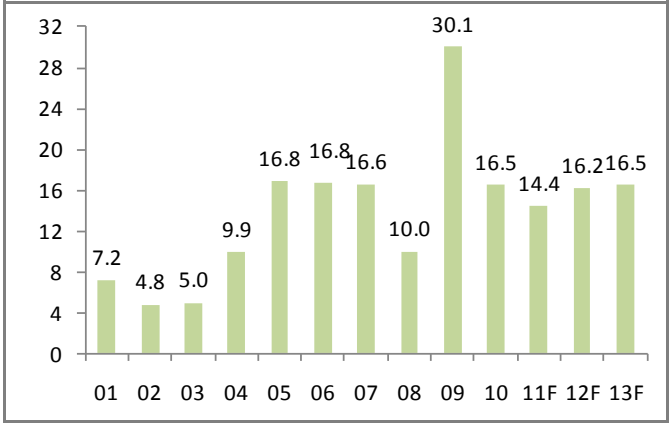
Section 2: Is the company a value creator?

Excellent value creator

Much higher ROICs after product mix change towards NPP equipments

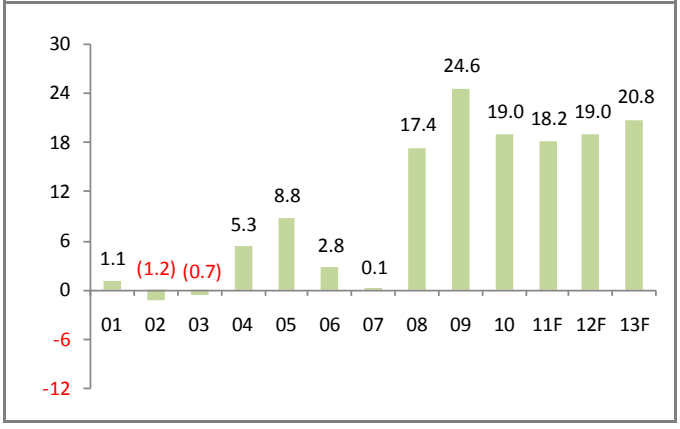
Woojin has been an excellent value creator with its ROIC overwhelmingly exceeding WACC since 2008. The company created virtually no value during 2006 and 2007 when it spun off some of its steel production temperature sensor division to form a joint venture with Heraeus Electro-Nite in 2006. However, the company's value structure completely changed in 2008 benefiting from a full supply of profitable core NPP measuring equipments. Profitability has fluctuated with product mix changes since then, but remained at consistently high levels compared to early 2000s.

Chart 6. ROE (%)



Source: Company data and Leading Research Center

Chart 7. ROIC less WACC (%)



Source: Company data and Leading Research Center

ROEs to remain high at 16% levels in the coming years

Meanwhile, ROE declined to below 17% in 2010 from over 30% in the previous year mainly due to the company's IPO in June 2010 which increased its outstanding shares by 33%. Profit growth will be high enough to offset the downward pressure on ROEs from continuous increases in retained earnings. We estimate the company will be able to maintain its ROEs at around 16% in the coming years.

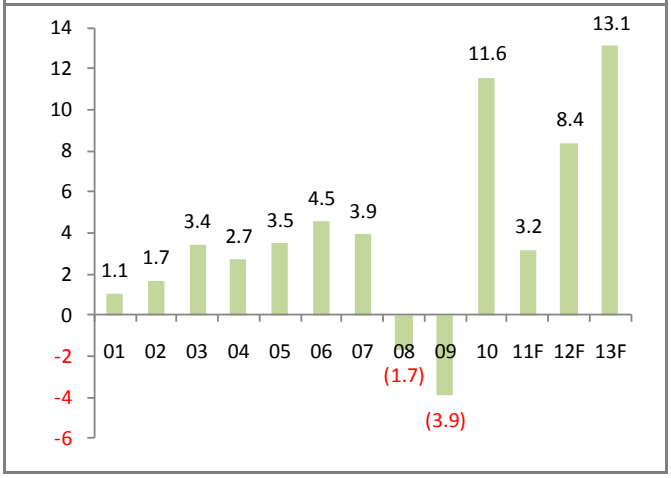
Section 3: Is the company a cash generator and share cash with shareholders?

Stable free cashflow generator

Cash flow management should be no concern for Woojin

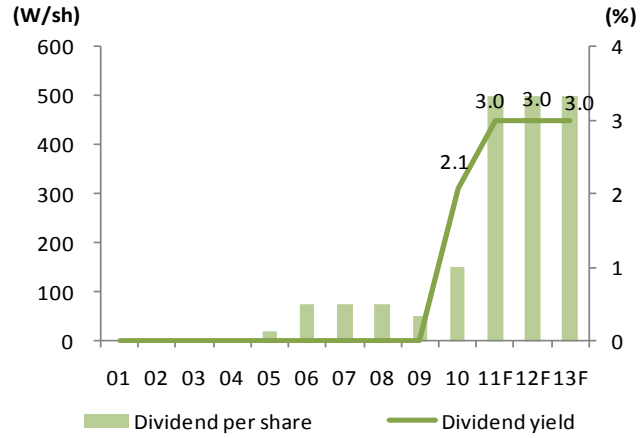
Woojin recorded negative free cash flow in 2008 and 2009 mainly due to sharp increases in account receivables. However, year-end book closing simply coincided with temporary increases in receivables and the company had more than enough cash holdings to cover negative cash flow. Working capital management should be no concern for the company because its cash holdings are equivalent to almost 90% of its total revenues and, more importantly, its major customers are KHNP and POSCO, who have virtually no default risk.

Chart 8. Free cash flow trend (Wbn)



Source: Company data and Leading Research Center

Chart 9. Dividend per share and yield trend



Note: Face value per share was reduced to W500 from W10,000 in 2009
Source: Company data and Leading Research Center

Management plans to maintain payout ratios at 30-40%

While the company will continue to generate stable cash flow in the future, it has no interest bearing debts to repay and no major investment plan. The company increased its dividend payout to W4.3bn (W500 per share) for 2010 from W1.0bn (W150 per share) for 2009. The management plans to maintain payout ratios at 30-40% in the future, which translate into dividend yields of 3-5%. However, given that the company is still at the early stage of growth, investment opportunities may surface and therefore we have assumed the same per share dividend of W500 through 2013 as 2010.

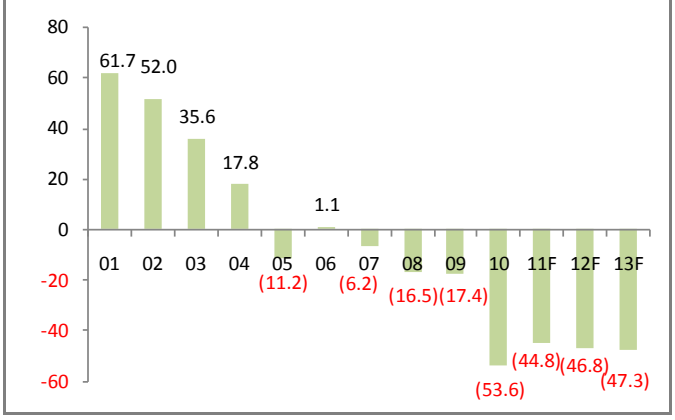
Section 4: Is the debt and interest burden manageable?

No interest bearing debt

Net cash position

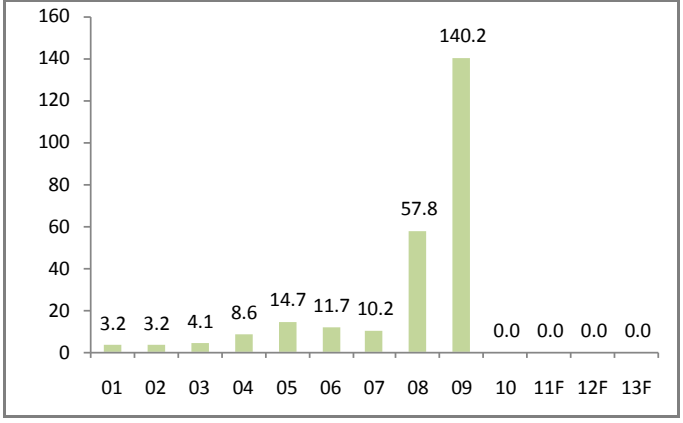
The company paid off interest bearings debts in 2009. Its net cash holdings increased to W46bn in 2010 in line with continuous earnings increase and IPO.

Chart 10. Net debt to equity (%)



Source: Company data and Leading Research Center

Chart 11. Interest coverage (x)



Source: Company data and Leading Research Center

Table 2. Borrowings and interest expenses

(Wbn)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011F	2012F	2013F
Interest bearing debt	10.2	9.5	8.9	6.2	3.6	2.6	2.2	2.6	0.0	0.0	0.0	0.0	0.0
Cash & equivalents	1.5	1.8	3.4	3.2	6.0	2.4	3.9	6.4	8.2	46.4	40.3	47.3	54.2
Net interest bearing debt	8.7	7.7	5.5	3.0	(2.4)	0.3	(1.7)	(3.8)	(8.2)	(46.4)	(40.3)	(47.3)	(54.2)
Net int. bear debt/eq (%)	61.7	52.0	35.6	17.8	(11.2)	1.1	(6.2)	(16.5)	(17.4)	(53.6)	(44.8)	(46.8)	(47.3)
Interest expenses	0.6	0.6	0.5	0.4	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Interest coverage (X)	3.2	3.2	4.1	8.6	14.7	11.7	10.2	57.8	140.2	N/A	N/A	N/A	N/A

Source: Company data and Leading Research Center

Section 5: What is the management philosophy?

Securing technical competitiveness - first priority

Co-CEOs

Woojin has co-CEOs, chairman, Sung Bum Lee, and president, Kye Hyeon Ryu. The chairman is the founder and the largest shareholder of the company. He joined Woojin Precision (Unlisted) in 1963 owned by his future father-in-law and promoted to executive vice president in 1980. In the same year, he decided to start his own business under the name of Woojin Inc. with key personnel from Woojin Precision.

Good business judgment capabilities

Although Mr. Lee does not have an engineering degree, he has a full understanding of the measuring equipment business and excellent business judgment capabilities. For example, he realized that technical alliances with foreign equipment producers are essential for long term growth when he was with Woojin Precision. Mr. Lee decided to establish his own company through a joint venture with Osaka Oxygen.

Example of resolving management conflict

Heraeus Electro-Nite became the second largest shareholder by taking over a 49% stake from Osaka Oxygen in 2002. However, Heraeus was not confident about a growth potential in the NPP measuring equipment market and therefore wanted Woojin to focus on the steel production equipment business. Mr. Lee solved this dilemma by spinning off some of the steel production measuring equipment divisions to a joint venture in exchange for Heraeus Electro-Note's stake in Woojin Inc.

Professional and reasonably shareholder friendly management

Mr. Lee has been involved in major investment and joint venture decisions only since his appointment of Mr. Kye Hyun Ryu to the president in 2002. Mr. Ryu is in full charge of day to day operation of the company. Mr. Ryu also has a long professional experience of more than 30 years in the measuring equipment business along with his master's degree in mechanical engineering. We believe the management is shareholder friendly given its plan to maintain high payout ratios relative to other Korean companies.

CEO Profile

Lee, Sung Bum

Professional experience

March 1999 ~Present	Chairman, Woojin Inc.
1980	President, Woojin Inc.
1980	Executive Vice President, Woojin Precision
1963	Joined Woojin Precision

Education

1963	BA in Economics, SeongKyunKwan University

Ryu, Kye Hyeon

Professional experience

May 2002~Present	President, Woojin Inc.
1999	Senior Managing Director, Woojin Inc.
1989	Joined Woojin Inc..
1989	Director, Woojin Precision
1983	Joined Woojin Precision
1980	Joined Pacific Controls

Education

1980	Master of Mechanical Engineering, KAIST
1978	BS in Mechanical Engineering, Seoul National University

Section 6: Peer group comparison

Comparable "twin" is difficult find since Woojin is the only domestic NPP core measuring equipment producer

It is difficult to find domestic peer group companies that qualify as a "twin" because the company is the sole domestic NPP core measuring equipment producer. The closest "twins" available peer comparison are listed in Table 4.

KEPCO affiliates are NPP maintenance/designing companies. BHI and Hy-lok are boiler/valve manufacturers with no exposure to the NPP measuring equipment business. In addition, Oval overlaps with Woojin in the flow meter business only. Most of NPP measuring equipment suppliers including Westinghouse are private companies.

Peer group comparisons do not provide reliable investment guidelines

When compared to the selected peer group companies shown in the table below, Woojin's valuations do not look much appealing. However, we believe comparisons with these selected companies do not provide reliable investment guidelines since their operations do not overlap, although they are categorically in the same industry.

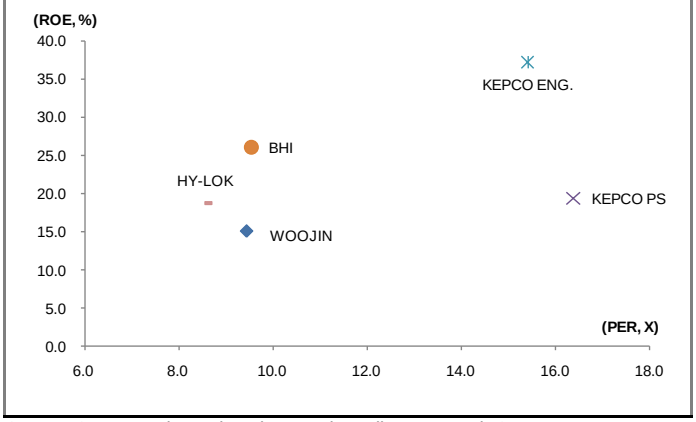
Table 3. Peer group comparison

Name	Ticker	Country	Mkt Cap (US$mn)	Sales (US$mn)				OP Margin (%)			
				09	10	11E	12E	09	10	11E	12E
Woojin	**105840 KS**	**Korea**	**127**	**39.6**	**45.3**	**59.2**	**70.0**	**16.9**	**17.2**	**16.5**	**17.1**
Kepco PS	051600 KS	Korea	1,582	634.6	729.0	858.9	951.1	13.7	13.6	13.2	13.9
Kepco eng.	052690 KS	Korea	2,643	348.6	502.0	650.3	781.2	21.9	29.4	29.8	31.4
BHI	083650 KQ	Korea	251	209.7	149.6	272.9	354.7	9.7	11.6	12.2	13.1
NSV	095300 KQ	Korea	24	29.3	19.2			16.2	(7.8)		
HY-LOK	013030 KQ	Korea	205	80.1	95.9	123.3	142.5	26.9	23.3	23.8	24.5
Oval	7727 JT	Japan	52	107.2	128.8			(0.1)	5.1		

Company	P/E (X)				EV/EBITDA (X)				P/B (X)				ROE (%)			
	09	10	11E	12E	09	10	11E	12E	09	10	11E	12E	09	10	11E	12E
Woojin		**15.1**	**11.3**	**9.4**		**14.1**	**9.0**	**6.9**		**2.2**	**1.6**	**1.4**	**30.1**	**16.5**	**14.4**	**16.2**
Kepco PS	19.9	24.0	16.4	14.2	11.9	14.5	9.1	7.8	4.1	4.5	3.1	2.8	21.9	19.9	19.4	20.7
Kepco eng.	26.4	24.5	15.4	12.2	18.0	17.8	10.1	7.6	6.8	8.2	5.0	3.9	29.2	38.2	37.3	36.8
BHI	15.1	12.4	9.5	7.1	13.5	12.4	7.9	5.7	4.2	2.9	2.4	1.9	33.8	23.7	26.1	27.0
NSV	14.3				10.7				2.6	1.3			22.9	(6.6)		
HY-LOK	7.1	10.0	8.6	7.2	4.6	6.2	5.9	4.7	1.4	1.5	1.4	1.2	24.1	16.3	18.8	18.9
Oval	223.0	11.9			8.4	3.8			0.3	0.4			3.0	3.0		

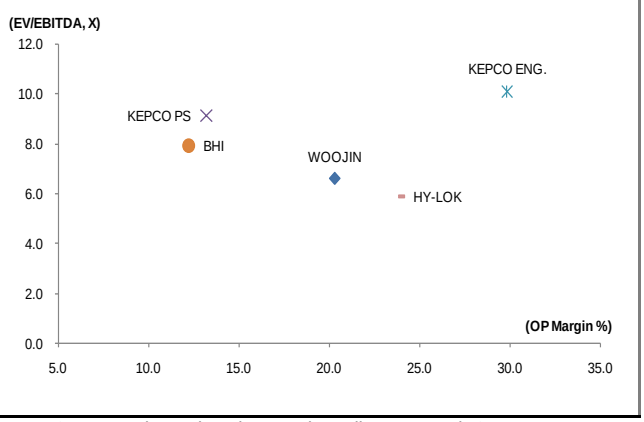
Source: Company data, Bloomberg and Leading Research Center

Chart 12. A Peer Group PER vs. ROE



Source: Company data, Bloomberg and Leading Research Center

Chart 13. A Peer Group EV/EBITDA vs. OP margin



Source: Company data, Bloomberg and Leading Research Center

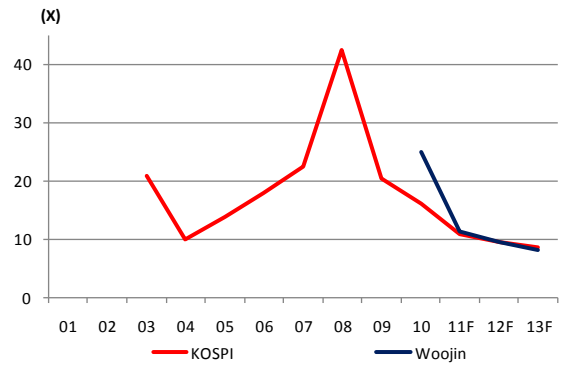
Section 7: Company is undervalued…Or is it?

Trading in line with the market, but …

Not enough historical share price data as the company was listed only a year ago

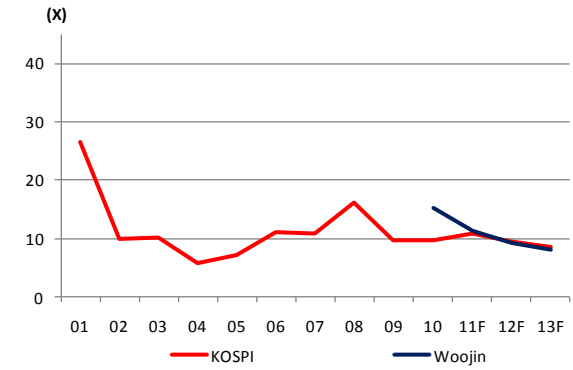
Historical P/E ratio comparisons with the market and the industry do not provide reliable valuation guidelines either as the company was listed only a year ago in July 2010. The share price rose as high as W36,900 (25.0 times 2010 EPS) a few days after IPO. But it is now trading in line line with the market at 11.3 times our 2011 EPS estimate. While the 2010 high P/E is an IPO overshooting, the current P/E valuation also ignores the company's growth story. We believe the company deserves a premium over both the market and the industry as not many Korean companies have such a strong growth potential.

Chart 14. Year-high PER trend vs. market



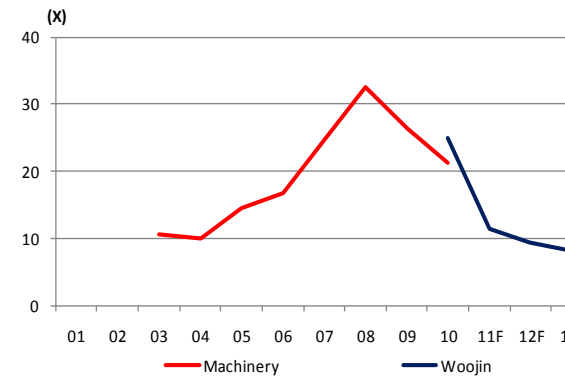
Source: Company data, FnGuide consensus and Leading Research Center

Chart 15. Year-low PER trend vs. market



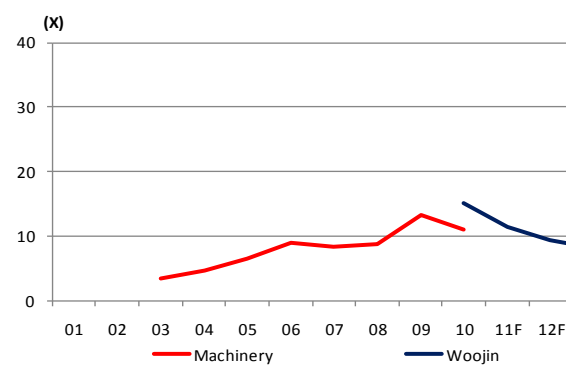
Source: Company, FnGuide consensus and Leading Research Center

Chart 16. Year-high PER trend vs. industry



Source: Company data, FnGuide consensus and Leading Research Center

Chart 17. Year-low PER trend vs. industry



Source: Company, FnGuide consensus and Leading Research Center

Section 8: FX exposure

No major FX impact

1% change in KRW/US$ rate to change operating profit 0.7% in 2011

Foreign exchange rates have no major impact on the company's revenues and profits. Until 2010, the company was a beneficiary of the strong Korean won against the US dollar as raw material imports (mostly from US) outweighed export sales. Beginning this year, the OEM supply of flow meters to Oval (US$12mn) will increase export sales to W13bn, 21% of total revenues compared to 2% in 2010. Subtracting raw material imports, the company's long position in the US dollar will be around US$7m, still not significant given that it is only 12% of total revenues. A 1% change in average KRW/US$ exchange rate will increase/decrease operating profit by 0.7% in 2011. The company has no foreign currency denominated debt or asset.

Table 4. FX sensitivity test

(Wbn)	Base Assumption				-1%			1%		
	2011F	2012F	2013F		2011F	2012F	2013F	2011F	2012F	2013F
KRW/US$	1,082	1,030	1,055	1% change in W/US$ rate	1,071	1,020	1,044	1,093	1,040	1,066
Revenue	62.5	74.1	86.5	Revenue	62.4	74.0	86.4	62.6	74.3	86.6
COGS	42.9	50.2	58.0	COGS	42.8	50.1	58.0	42.9	50.2	58.1
OP	10.3	12.7	15.5	OP	10.2	12.7	15.4	10.3	12.8	15.5
EPS (W)	1,469	1,781	2,049		1,460	1,773	2,043	1,478	1,788	2,055
				Impact on revenue (%)	(0.2)	(0.2)	(0.2)	0.2	0.2	0.2
				Impact on COGS (%)	(0.1)	(0.1)	(0.1)	0.1	0.1	0.1
				Impact on OP (%)	(0.7)	(0.5)	(0.4)	0.7	0.5	0.4
				Impact on EPS (%)	(0.6)	(0.4)	(0.3)	0.6	0.4	0.3

(Wbn)					-5%			5%		
	2011F	2012F	2013F		2011F	2012F	2013F	2011F	2012F	2013F
KRW/US$	1,082	1,030	1,055	1% change in W/US$ rate	1,028	979	1,002	1,136	1,082	1,108
Revenue	62.5	74.1	86.5		61.8	73.5	85.8	63.2	74.8	87.2
COGS	42.9	50.2	58.0		42.6	49.9	57.7	43.2	50.5	58.4
OP	10.3	12.7	15.5		9.9	12.4	15.2	10.6	13.1	15.8
EPS (W)	1,469	1,781	2,049		1,424	1,743	2,015	1,514	1,818	2,082
				Impact on revenue (%)	(1.1)	(0.9)	(0.8)	1.1	0.9	0.8
				Impact on COGS (%)	(0.7)	(0.6)	(0.6)	0.7	0.6	0.6
				Impact on OP (%)	(3.7)	(2.5)	(2.0)	3.7	2.5	2.0
				Impact on EPS (%)	(3.0)	(2.1)	(1.6)	3.0	2.1	1.6

Source: Leading Research Center

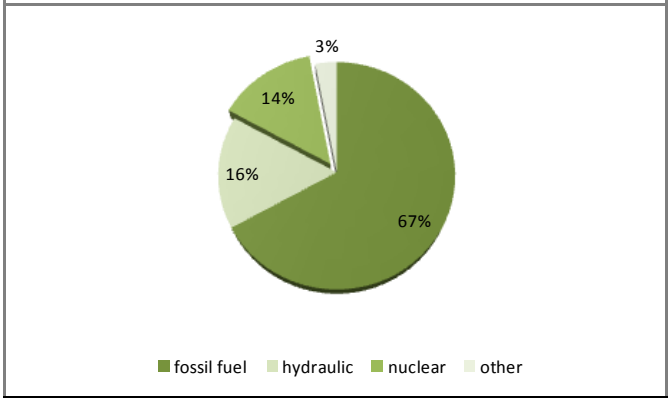
Section 9: Operations overview

Nuclear power plant measuring equipments

Nuclear power to remain as a major power generation source after adopting stricter safety regulations

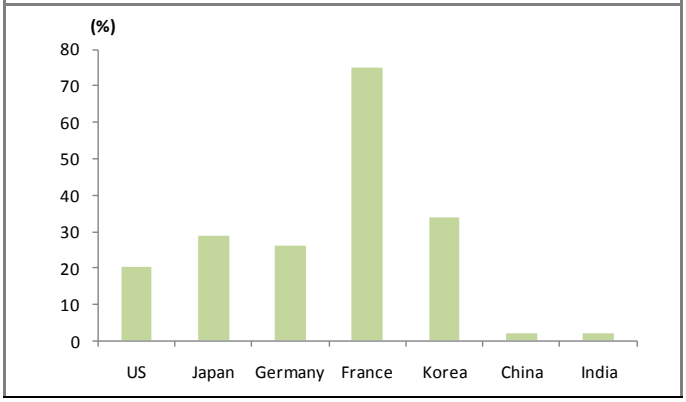
While nuclear power construction projects have been under reassessment globally since the Fukushima nuclear disaster, we believe most countries will have to continue to rely on nuclear power after adopting more strict safety regulations. Given that nuclear power already accounts for 14% of global power generation (34% in Korea), it is unlikely that fossil fuel power will replace nuclear power due to various environmental and economic reasons. Unless a new source of energy source is discovered or power consumption pattern at home and industries completely changes, it is highly likely that the current reliance on nuclear power generation will even increase going forward.

Chart 18. Global power mix by source (2010)



Source: Company data

Chart 19. Nuclear power reliance by country (2010)



Source: Company data

Woojin to enjoy a full-fledged growth momentum replacing Westinghouse

Korean government plans to finish the construction of six nuclear reactors by 2017 with four reactors currently under construction and orders for the remaining two reactors already placed. The government plans to add another six nuclear reactors during 2018 and 2024. When KHNP began developing its own nuclear reactor (Model No. APR-1400) based on the Westinghouse's OPR-1000 model, it was contracted to purchase core measuring equipments for new nuclear reactors from Westinghouse until the completion of the nuclear reactor in 2014. As such, Woojin will be able to enjoy a full-fledged growth momentum as NPP measuring equipment producer supplying core measuring equipments for new NPPs to be completed in 2016 and thereafter.

Table 5. Nuclear reactor construction schedule in Korea

Year	2012	2013	2014	2015	2016	2017
Nuclear reactor	1	2	1	0	1	1
Year	**2018**	**2019**	**2020**	**2021**	**2023**	**2024**
Nuclear reactor	1	1	1	1	1	1

Source: Korea Hydraulic & Nuclear Power Co.

Additional revenues of W10bn by supplying to new NPPs

While each new nuclear reactor requires measuring equipments worth around W15bn, core equipments for NSSS account for around 2/3 of total equipment value with the remaining 1/3 value for non-core equipments for the use in main control room and field instruments. As such, KHNP's NPP construction projects will provide Woojin with additional core measuring equipment revenues of W10 each year (55% of total NPP equipment revenues in 2010) as early as late 2013 or early 2014 (Measuring equipment orders for new NPP are placed around two years before operation).

Total replacement demand estimated at W60bn

The NPP measuring equipment market for Woojin will still grow strongly from 2011 through 2014 even without additional core equipment revenues from new NPPs. There are 20 nuclear reactors in operation in Korea currently and annual average replacement demand from these nuclear reactors is estimated at around W60bn (total measuring equipment requirement of W300bn for 20 nuclear reactors divided by approximately 5 year replacement cycle). Woojin is currently able to supply around 50% of this W60bn replacement demand because there are nuclear reactors not based on Westinghouse and APR-1400 models. The company plans to focus on the production of measuring equipments for APR-1400 nuclear reactors.

Woojin's NPP equipment revenues to reach W40bn in 2013 from W18bn in 2010

KHMP's measuring equipment replacement schedule was delayed last year due to budget constraints. Given the Fukushima nuclear disaster, delayed orders will come through this year and replacement cycle will be stabilized hereafter. Based on this and Woojin's continuous product line up expansion, we estimate the company's NPP equipment revenues to reach as much as W40bn in 2013F compared to W18bn in 2000. Adding the estimated new revenues of W10bn each year from the planned NPP construction projects and additional replacement from new NPPs, the company's NPP equipment revenues would reach W80-90bn towards the end of this decade.

Steel measuring equipments and flow meters

Steel capacity expansion to generate revenues of W30-W48bn during 2012 and 2014

While there has been no major capacity expansion by Korean steel producers since the completion of Hyundai Steel's blast furnace, another around of expansion projects is underway as shown in the table below. A total of 14.5m ton capacity expansion has been confirmed and POSCO's five expansion projects are yet to be finalized. Given that around 3m ton capacity steel plant requires measuring equipments worth W6-10bn, the confirmed expansion projects alone will generate total revenues of W30-W48bn during 2012F and 2014F for Woojin. Measuring equipments are installed at steel plants approximately three months before completion. Replacement demand from existing steel plants is estimated at around W10bn each year.

Table 6. Capacity expansion plan by major Korean steel producers

Company	Location	Capacity (1,000 tons)	Start	Completion
POSCO	Indonesia	3,000	2010	2013
	Kwangyang	3,300	2011	2014
	Brazil	3,000	2011	2014
Hyundai Steel	Dangjin	4,000	2011	2013
Dongkuk Steel	Inchon	1,200	2011	2012
POSCO	India	12,000		
	India	6,000		
	Indonesia	3,000		
	Brazil	3,000		
	Vietnam	1,200		

Note: POSCO's expansion in Brazil is a joint venture with Dongkuk Steel
Source: Company data

More flow meter orders expected after the Oval order

Woojin will supply W13.5bn flow meters on an OEM basis to Oval Corp. who received orders from Daelim Industrial (000210 KS), the main contractor of the oil refinery construction in Kuwait. Oval is also bidding for the supply of flow meter system for the oil refinery facilities in Jurong Island, Singapore, which is under construction by Hyundai Construction & Engineering (000720 KS). Woojin estimates that Jurong Island order will be around W6bn and will come through in 2H11. Korean construction companies have also received orders of oil refinery construction projects in Ecuador and Saudi Arabia. Woojin started the production of high-end flow meters only four years ago after forming a joint venture with Oval and therefore has not built up enough references. The company plans to continue to supply flow meters on an OEM basis through Oval at least until the Jurong Island refinery project

Earnings outlook

Strong growth in both revenues and profits

Revenues and earnings to fully recover in 2Q11

Woojin's 1Q11 results look quite disappointing with sales and operating profit falling 21% yoy and 58% yoy, respectively. However, the 1Q11 results are simply attributable to the timing of revenue recognition and therefore detailed review is meaningless. For example, the company recognized flow meter revenues of only W0.6bn in 1Q11 while it received W13.5bn order in January and has to deliver this order by the end of this year. We estimate that the company's operating profit will almost double to W2.6bn in 2Q11 from W1.3bn in 2Q10, on sales growth of 27% yoy to W14.7bn.

Table 7. Quarterly results and outlook

(Wbn)	2010	1Q11	YoY (%)	2Q11E	YoY (%)	2011F	2012F	2013F
Sales	52.4	9.6	(20.8)	14.7	26.7	62.5	74.1	86.5
Gross profit	16.9	2.9	(30.7)			19.6	23.9	28.5
Operating profit	9.0	0.9	(58.3)	2.6	99.2	10.3	12.7	15.5
Pretax profit	13.1	1.6	(47.1)			15.6	18.8	21.7
Net income	11.0	1.3	(45.2)			12.8	15.5	17.8
Margin (%)								
Gross	32.4	30.3				31.4	32.3	32.9
Operating	17.2	8.9		17.7		16.4	17.2	17.9
Pretax	25.0	16.2				24.9	25.4	25.1
Net	21.1	14.0				20.4	20.9	20.6

Source: Company data and Leading Research Center

NPP equipments to lead revenue growth of 19% yoy in 2011 and per annum growth of 17% yoy to 2013

We expect a strong revenue growth of 19% yoy to W63bn in 2011 compared to a relatively low 4% yoy growth in 2010, followed by per annum growth of 17% yoy to W87bn in 2013. Revenue growth will mostly come from NPP measurement equipment sales which will increase 46% yoy in 2011E, 15% yoy in 2012F and 28% yoy in 2013F. Although the company will not be able to supply core measuring equipments for new NPPs until late 2013, replacement demand will remain stable and the company will continue to supply non-core measuring equipments for new NPPs. The company is expanding its product line up into both core and non-core equipments. According to the company, its current product line up covers around 80% of total core measuring equipments.

Table 8. Revenues trend and product mix

(Wbn)	2009	2010	1Q11	YoY (%)	2011F	2012F	2013F
Nuclear	15.9	18.2	2.7	(26.6)	26.5	30.5	39.1
Steel	21.2	18.4	4.6	(16.4)	14.2	17.3	19.2
Flowmeters	5.1	6.1	0.6	19.8	14.1	15.2	16.8
Other	3.2	9.6	1.6	(30.4)	7.7	11.1	11.4
Total	50.3	52.4	9.6	(20.8)	62.5	74.1	86.5
Product Mix (%)							
Nuclear	31.6	34.7	28.4		42.4	41.2	45.2
Steel	42.2	35.2	48.1		22.7	23.3	22.2
Flowmeters	10.1	11.7	6.3		22.6	20.5	19.4
Other	16.0	18.4	17.2		12.3	15.0	13.2

Source: Company data and Leading Research Center

Flow meter revenues to increase 130% yoy in 2011

Flow meters will be another major revenue contributor in 2011 with sales increasing 130% yoy to W14bn. Given that the new OEM order from Oval alone amounts to W13.5bn and the company supplied W6bn worth flow meters to other customers in 2010, our revenue forecast may look overly conservative. However, the company has indicated that its flow meter capacity is somewhat limited and therefore it will have to focus solely on the OEM order this year.

Steel measuring equipment revenues to continue to decline in 2011 and recover in 2012

The low revenue growth of 4% in 2010 reflects the absence of major expansion by steel mills. We estimate steel production measuring equipment demand to remain low until 2012. As such, we estimate these equipment revenues will continue to decline 23% yoy to W14bn in 2011 before picking up in 2012.

Operating profit will increase to W16bn in 2013 from W9bn in 2011

We estimate operating profit will increase 14% yoy to W10.3bn in 2011, but relatively slowly compared to the almost 20% yoy growth in total revenues and especially 46% yoy growth in high margin NPP equipment sales. We have assumed a drop in operating margin to 16.4% in 2011 from 17.2% in 2010 to reflect the increasing sales of lower margin flow meters. However, high margin NPP measuring equipment sales will continue to remain strong and steel production measuring equipment sales will recover in 2012. Based on these, we estimate operating margin will recover to 17.2% in 2012 and 17.9% in 2013.

Pretax profit margins to remain high at 25% levels

Pretax profit margins will remain at 25% levels, much higher than operating margins of 16-18%. While non-operating expenses will be negligible reflecting debt free management, interest income will continue to increase in line with cash holding increases from IPO and retained earnings. Equity method earnings (mostly from Woojin Electro-Nite) will be the largest contributor (62%) to non-operating income. Although Woojin's steel production measuring equipment sales will decline this year, we expect equity method earnings from Woojin Electro-Nite to continue to increase as the affiliate produces expendable sensors which related to steel production volume, not to steel capacity expansion.

Valuations – Target price of W20,900

Target price of W20,900 – a 26% upside

We believe the share price has more than fully adjusted to slow earnings growth in 2010 with the share price falling 55% from the 2010 high. Concerns over the Fukushima nuclear disaster and disappointing 1Q11 results have overplayed. While the shares are currently trading in line with the market in terms of 2011E P/E and EV/EBITDA valuations, the current valuations barely reflect the company's strong growth story and we believe the company deserves a premium over the market. By applying a P/E of 14.2x, a 30% premium over the 2011F market P/E, to our 2011 EPS estimate of W1,469, we have derived our target price of W20,900, which represents a 26% upside.

Table 9. Valuations at the current price and our target price

		2011F	2012F	2013F
Woojin	P/E (x)	11.3	9.4	8.1
	EV/EBIDAT (x)	9.0	6.8	5.3
KOSPI	P/E (x)	10.9	9.6	8.5
	EV/EBIDAT (x)	8.9	8.0	7.5
Target price – W20,900				
Woojin	P/E (x)	14.2	11.7	10.2
	EV/EBIDAT (x)	12.2	9.4	7.4

Source: Company data and Leading Research Center

Summary of financials

Income statement

(Wbn)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011F	2012F	2013F
Revenue	**31.0**	**33.1**	**31.8**	**35.4**	**39.3**	**31.0**	**25.1**	**36.5**	**50.3**	**52.4**	**62.5**	**74.1**	**86.5**
% chg yoy	(0.2)	6.9	(3.9)	11.2	11.1	(21.2)	(19.0)	45.5	37.7	4.2	19.4	18.6	16.7
COGS	26.9	29.3	28.0	29.5	30.4	23.8	17.8	22.1	35.3	35.4	42.9	50.2	58.0
Gross profit	**4.1**	**3.8**	**3.8**	**5.9**	**8.9**	**7.2**	**7.3**	**14.4**	**14.9**	**16.9**	**19.6**	**23.9**	**28.5**
GP margin (%)	13.2	11.6	12.0	16.8	22.7	23.2	29.1	39.4	29.7	32.4	31.4	32.3	32.9
SG&A	**2.0**	**2.1**	**1.9**	**2.9**	**5.4**	**5.3**	**5.9**	**7.2**	**6.4**	**7.9**	**9.4**	**11.2**	**13.0**
Operating income	**2.1**	**1.8**	**1.9**	**3.1**	**3.5**	**1.9**	**1.4**	**7.2**	**8.5**	**9.0**	**10.3**	**12.7**	**15.5**
OP margin (%)	6.7	5.3	6.1	8.7	8.9	6.0	5.6	19.6	16.9	17.2	16.4	17.2	17.9
Non-operating income	0.6	0.3	0.7	0.6	1.1	2.4	3.8	2.4	5.8	4.4	5.6	6.4	6.5
Interest income	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.9	1.3	1.5	1.6
FX gains	0.3	0.1	0.0	0.2	0.2	0.1	0.0	0.2	0.1	0.1	0.2	0.2	0.2
Equity method earnings	0.1	0.1	0.4	0.0	0.0	0.1	2.9	1.2	2.5	3.0	3.5	4.0	4.0
Non-operating expenses	1.5	1.1	1.5	1.7	0.8	0.4	0.6	4.4	1.3	0.3	0.3	0.3	0.3
Interest expenses	0.6	0.6	0.5	0.4	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0
FX losses	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1
Equity method losses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Profit before tax	**1.2**	**1.0**	**1.1**	**2.0**	**3.7**	**3.9**	**4.6**	**5.2**	**13.1**	**13.1**	**15.6**	**18.8**	**21.7**
Tax	0.2	0.3	0.4	0.4	0.5	0.0	0.3	2.6	2.4	2.0	2.8	3.4	3.9
Tax rate (%)	20.5	30.7	34.0	20.1	13.6	0.2	6.3	50.6	18.7	15.6	18.0	18.0	18.0
Net income	**1.0**	**0.7**	**0.8**	**1.6**	**3.2**	**3.8**	**4.3**	**2.6**	**10.6**	**11.0**	**12.8**	**15.5**	**17.8**

Balance sheet

(Wbn)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011F	2012F	2013F
Cash & deposit	0.6	1.1	1.5	2.3	5.5	2.3	3.7	3.1	5.2	14.6	15.9	17.0	17.5
Marketable securities	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.3	1.1	5.0	4.0	7.5	36.7
A/R	4.1	3.7	2.6	4.5	4.8	3.8	3.6	7.3	18.2	11.4	12.8	14.4	16.8
Other quick assets	1.2	0.9	1.9	1.2	1.1	1.5	1.7	1.2	0.4	0.9	1.0	1.3	1.8
Total quick assets	6.7	6.3	7.9	9.0	11.9	7.7	9.2	14.9	26.9	58.8	54.1	63.0	73.8
Inventory	6.1	6.7	5.7	5.9	7.5	2.9	4.1	5.2	7.5	10.5	12.8	15.7	18.0
Total current assets	**12.8**	**13.0**	**13.6**	**14.9**	**19.4**	**10.6**	**13.3**	**20.1**	**34.4**	**69.3**	**66.9**	**78.7**	**90.8**
Investments	2.3	2.9	2.0	1.8	2.8	9.1	12.6	6.0	11.9	14.0	15.0	15.0	15.0
Tangible assets	13.9	13.3	13.3	12.9	13.2	11.2	11.4	13.4	14.2	15.0	22.0	23.0	25.0
Others	3.6	3.5	3.4	2.3	2.0	1.4	1.4	0.2	0.3	1.1	1.4	1.6	1.9
Total non-current assets	**19.7**	**19.6**	**18.7**	**17.0**	**18.1**	**21.6**	**25.5**	**19.6**	**26.3**	**30.2**	**38.4**	**39.6**	**41.9**
Total assets	**32.5**	**32.7**	**32.3**	**31.9**	**37.5**	**32.2**	**38.8**	**39.7**	**60.7**	**99.4**	**105.3**	**118.3**	**132.7**
Trade Payables	4.4	3.8	3.2	4.0	5.3	1.4	4.1	4.8	7.7	7.7	8.8	10.5	12.1
Short-term borrowings	2.0	3.4	4.8	3.5	2.0	2.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0
Current portion of LT debt	1.8	1.8	1.3	1.1	0.9	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Others	0.9	1.4	1.1	1.2	2.7	1.5	2.3	6.4	2.9	3.0	3.5	3.7	3.1
Total current liabilities	**9.2**	**10.3**	**10.3**	**9.8**	**10.9**	**5.3**	**8.5**	**13.7**	**10.5**	**10.6**	**12.3**	**14.2**	**15.2**
Long-term debt	6.4	4.3	2.8	1.6	0.6	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Retirement reserve	2.8	3.1	3.3	3.0	3.5	1.5	1.7	2.0	1.5	0.0	0.0	0.0	0.0
Others	0.0	0.1	0.4	0.6	0.9	1.0	0.5	0.7	1.3	2.1	3.0	3.0	3.0
Total LT liabilities	**9.2**	**7.5**	**6.6**	**5.2**	**5.0**	**2.7**	**2.3**	**2.8**	**2.8**	**2.1**	**3.0**	**3.0**	**3.0**
Total liabilities	**18.4**	**17.9**	**16.9**	**15.0**	**15.9**	**8.1**	**10.8**	**16.5**	**13.3**	**12.8**	**15.3**	**17.2**	**18.2**
Paid-in capital	0.9	0.9	0.9	0.9	0.9	0.9	0.9	2.5	3.3	4.3	4.3	4.3	4.3
Capital surplus	2.9	2.9	2.9	2.9	2.9	2.9	2.9	0.8	13.9	44.6	44.6	44.6	44.6
Retained earnings	10.4	11.1	11.7	13.2	16.3	20.0	24.1	26.7	30.3	40.4	48.8	59.9	73.3
Capital adjustments	0.0	0.0	(0.0)	(0.0)	1.6	0.4	0.1	(6.8)	(0.0)	(2.6)	(7.7)	(7.7)	(7.7)
Total shareholder's equity	**14.1**	**14.8**	**15.5**	**16.9**	**21.6**	**24.1**	**28.0**	**23.2**	**47.4**	**86.7**	**90.0**	**101.1**	**114.6**

Free cashflow analysis

(Wbn)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011F	2012F	2013F
Net profit	**1.0**	**0.7**	**0.8**	**1.6**	**3.2**	**3.8**	**4.3**	**2.6**	**10.6**	**11.0**	**12.8**	**15.5**	**17.8**
add non-cash expenses	**2.4**	**2.5**	**2.8**	**3.4**	**2.8**	**2.1**	**1.8**	**1.7**	**2.0**	**2.1**	**2.5**	**3.0**	**6.3**
Depreciation	1.0	0.9	0.9	1.0	1.0	1.0	0.6	0.6	0.7	0.9	1.0	1.2	1.4
Equity method losses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other non-cash exp	1.5	1.6	1.9	2.4	1.8	1.1	1.1	1.1	1.3	1.3	1.5	1.8	4.9
subtract non-cash income	**0.3**	**0.2**	**0.5**	**0.4**	**0.6**	**2.1**	**2.9**	**1.4**	**4.3**	**3.1**	**3.8**	**4.3**	**4.3**
Equity method gains	0.1	0.1	0.4	0.0	0.0	0.1	2.9	1.2	2.5	3.0	3.5	4.0	4.0
Other non-cash incomes	0.2	0.1	0.1	0.4	0.6	2.0	0.0	0.2	1.8	0.1	0.3	0.3	0.3
Cash from operation	**3.1**	**3.0**	**3.0**	**4.6**	**5.4**	**3.8**	**3.2**	**2.8**	**8.3**	**10.0**	**11.5**	**14.2**	**19.8**
Capital expenditure	0.7	0.4	1.1	0.6	1.3	0.9	0.9	0.4	1.7	2.2	5.7	3.0	3.5
Increase in working capital	1.4	0.9	(1.5)	1.3	0.6	(1.7)	(1.7)	4.1	10.4	(3.8)	2.6	2.8	3.1
Free cash flow	**1.1**	**1.7**	**3.4**	**2.7**	**3.5**	**4.5**	**3.9**	**(1.7)**	**(3.9)**	**11.6**	**3.2**	**8.4**	**13.1**
Dividends	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.0	4.3	4.3	4.3
Net investments	(1.1)	0.6	(0.8)	(0.2)	1.0	6.2	3.6	(6.7)	5.9	2.1	1.0	0.0	0.0
Share issues	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	31.9	0.0	0.0	0.0
Increase in debt	(1.4)	(0.7)	(0.6)	(2.7)	(2.7)	(0.9)	(0.4)	0.4	(2.6)	0.0	0.0	0.0	0.0
Others	1.2	(0.2)	3.2	(0.7)	(3.5)	0.4	(1.6)	5.8	(0.9)	30.9	(3.5)	3.0	8.3
Net cash flow	**(0.7)**	**0.5**	**0.3**	**0.8**	**3.2**	**(3.2)**	**1.4**	**(0.5)**	**2.1**	**9.4**	**1.4**	**1.1**	**0.5**
Beginning cash	1.3	0.6	1.1	1.5	2.3	5.5	2.3	3.7	3.1	5.2	14.6	15.9	17.0
Ending cash	0.6	1.1	1.5	2.3	5.5	2.3	3.7	3.1	5.2	14.6	15.9	17.0	17.5

Key ratios and stability ratios

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011F	2012F	2013F
Current ratio (%)	139.4	126.2	131.6	151.5	178.2	197.5	157.2	146.9	326.4	651.4	544.5	552.8	598.4
Quick ratio (%)	51.5	48.2	39.1	69.1	94.1	113.9	86.1	78.4	232.0	291.2	266.1	273.2	280.8
Inv holding period (days)	73.0	79.5	80.8	71.7	80.2	79.6	71.7	76.6	65.6	92.8	99.3	103.7	106.0
A/R collection period (days)	45.8	42.7	35.6	36.4	43.1	50.8	54.3	54.7	92.7	103.4	70.7	67.0	65.8
A/P period (days)	55.0	50.3	47.1	44.1	53.1	64.1	53.4	70.2	60.6	72.8	66.5	66.4	68.4
Interest bear debt (Wbn)	10.2	9.5	8.9	6.2	3.6	2.6	2.2	2.6	0.0	0.0	0.0	0.0	0.0
Interest bear debt/equity (%)	72.0	63.9	57.6	36.9	16.5	10.9	7.9	11.2	0.0	0.0	0.0	0.0	0.0
Net int. bear debt (Wbn)	8.7	7.7	5.5	3.0	(2.4)	0.3	(1.7)	(3.8)	(8.2)	(46.4)	(40.3)	(47.3)	(54.2)
Net debt/equity (%)	61.7	52.0	35.6	17.8	(11.2)	1.1	(6.2)	(16.5)	(17.4)	(53.6)	(44.8)	(46.8)	(47.3)
Liability/equity (%)	130.1	120.4	109.3	88.5	73.7	33.4	38.4	70.9	28.0	14.7	17.0	17.0	15.9
Interest coverage (X)	3.2	3.2	4.1	8.6	14.7	11.7	10.2	57.8	140.2	N/A	N/A	N/A	N/A

Valuations and margins

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011F	2012F	2013F
EV/EBITDA (X)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.8	9.0	6.8	5.3
EPS (W)	164	118	128	273	551	653	734	497	1,841	1,479	1,469	1,781	2,048
EPS y-y (%)	(59.7)	(28.3)	8.9	112.8	101.7	18.6	12.4	(32.3)	270.5	(19.7)	(0.7)	21.2	15.0
PER (X)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.3	11.3	9.4	8.1
BVPS (W)	2,404	2,522	2,627	2,877	3,670	4,105	4,759	4,514	8,221	11,608	10,369	11,650	13,198
P/BVPS (X)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.4	1.6	1.4	1.3
Dividend (W)	0	0	0	20	75	75	75	50	150	500	500	500	500
Yield (%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.0	3.0	3.0	3.0
ROE (%)	7.2	4.8	5.0	9.9	16.8	16.8	16.6	10.0	30.1	16.5	14.4	16.2	16.5
ROA (%)	3.0	2.1	2.3	5.0	9.3	11.0	12.2	6.5	21.2	13.8	12.5	13.8	14.2
GP margin (%)	13.2	11.6	12.0	16.8	22.7	23.2	29.1	39.4	29.7	32.4	31.4	32.3	32.9
OP margin (%)	6.7	5.3	6.1	8.7	8.9	6.0	5.6	19.6	16.9	17.2	16.4	17.2	17.9
NP margin (%)	3.1	2.1	2.4	4.5	8.2	12.4	17.2	7.0	21.1	21.1	20.4	20.9	20.6
EBITDA margin (%)	10.9	9.2	9.6	12.9	12.7	11.0	9.1	22.3	18.5	19.1	18.5	19.2	19.9
ROIC (%)	8.4	6.1	6.6	13.4	17.5	11.8	9.2	26.2	34.0	28.4	27.6	28.4	30.2
WACC (%)	7.3	7.2	7.3	8.1	8.8	9.0	9.1	8.7	9.4	9.4	9.4	9.4	9.4
ROIC less WACC (%)	1.1	(1.2)	(0.7)	5.3	8.8	2.8	0.1	17.4	24.6	19.0	18.2	19.0	20.8

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